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The Relationship Between Personality and Job Satisfaction Across Occupations

Running title: Person-occupation fit

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ABSTRACT

Research shows that people select themselves and are selected into occupations, partly because of their personality, and this has implications for their person-environment fit. Although it has been shown that personality congruence between the individual and the environment is important to job satisfaction, the effect of personality congruence in occupations on job satisfaction is not well understood. In a sample of 22,787 individuals, nested within 25 occupational groups from the British Household Panel Survey and the UK Household Longitudinal Study, we examined (1) whether average levels of personality vary across occupational groups, and (2) whether there is a cross-level interaction between the occupational mean personality and the individual's personality, with job satisfaction. We found there were modest differences across occupational groups in all FFM traits. Neuroticism and openness interacted with the corresponding mean personality, showing that for these traits the fit between your own personality and the average personality of the occupation makes a difference for job satisfaction.

Keywords: *Job satisfaction, personality, person-environment fit, person-occupation fit*

1. INTRODUCTION

Vocational choices are not random. Individuals often seek out, and are selected into, experiences and environments compatible with their personality, creating person-environment fit (Kristof-Brown, Zimmerman, & Johnson, 2005; Schneider, 1987). Person-environment fit is suggested as a key tool in personnel selection and retention (Ostroff & Zhan, 2012), and better fit has been associated with higher employee job satisfaction and wellbeing, as well as lower turnover rates (Kristof-Brown & Guay, 2011; Verquer, Beehr, & Wagner, 2003). The general theme of person-environment fit is sometimes discussed in more specific terms of person-organization, person-job, person-group or person-supervisor fit (Kristof-Brown et al., 2005). However, individuals might not be able to select the specific organizations in which they work, the job they do, or their supervisors. People have more opportunities to select which broader occupational pathways to follow, as vocational choice precedes organizational choice (Bradley-Geist & Landis, 2011; King et al., 2016). Person-occupation fit can therefore be viewed as an early instance of person-environment fit processes that may eventually develop into more specific fits between persons, organizations, and jobs (Bradley-Geist & Landis, 2011). Therefore, the present study examines whether individuals cluster in occupations based on their personality, and whether the fit between the individual's personality and the mean personality of the occupation is associated with job satisfaction.

1.1. Occupational choices based on personality traits

Individuals with similar personalities develop similar interests and drift toward occupations that match those interests, creating personality homogeneity in occupations (Holland, 1997). A personality model that has frequently been used to study vocational interests is the Five-Factor Model of personality (FFM). The FFM is one of the most used taxonomies of

personality and defines five broad personality traits: neuroticism (e.g., anxious, hostile, nervous), extraversion (e.g., sociable, fun loving, optimistic), conscientiousness (e.g., well organized, reliable, persevering), agreeableness (e.g., trusting, flexible, sympathetic), and openness to experience (e.g., originality, independence, intellectual curiosity) (Costa & McCrae, 1992; Digman, 1990). The FFM traits have been shown to relate to important outcomes of personal wellbeing (Hakulinen et al., 2015; Strickhouser, Zell, & Krizan, 2017), and job-related criteria such as job satisfaction (Avery, Smillie, & Fife-Schaw, 2015; Cohrs, Abele, & Dette, 2006; Judge, Heller, & Mount, 2002).

Previous studies examining the association between occupational clustering of the FFM personality traits have focused on *Holland's Vocational Type theory* (Holland, 1997) to classify occupations. Holland's framework identifies six vocational interest dimensions, Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC). The six vocational types characterize both occupational interests and individual differences in interests (Holland, 1997). For example, Realistic individuals tend to prefer working with things and dislike helping activities, and typical Realistic jobs include building construction and auto mechanics (see Holland, 1997, for a detailed description of all RIASEC types, and Rounds et al., 1999, for a description on which occupations match the RIASEC).

Early meta-analytic evidence showed that four of the five personality traits were associated with the RIASEC types: openness with Artistic and Investigative interests, extraversion with Enterprising and Social interests, conscientiousness with Conventional and Enterprising interests, and agreeableness with Social interests (Barrick, Mount, & Gupta, 2003; Larson, Rottinghaus, & Borgen, 2002). More recent studies have shown that Enterprising and Social occupations are more likely to be occupied by extravert employees, whereas Conventional and Realistic occupations are more common for highly conscientious individuals (King et al., 2016). Furthermore, neuroticism has been shown to be inversely

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related with Realistic interests (McKay & Tokar, 2012) and Enterprising interests (Wille & De Fruyt, 2014).

Taken together, although FFM personality traits have been associated with RIASEC interest types, it remains unclear how personality traits are distributed across occupations. By assessing mean levels of FFM personality traits across 25 occupational groups, we expand the current knowledge on the extent of occupational homogeneity. This delivers important information on the contribution of personality to occupational sorting, which has implications for the composition of employee pools in organizations.

1.2. Person-occupation fit

The *attraction-selection-attrition* (ASA) model states that people are attracted to, and selected by, specific environments according to their individual dispositions (Schneider, 1987). This selection effect leads to the environments becoming more homogeneous over time, which results in an increasingly strong person-environment fit between individuals and specific environments (Schneider, 1987). Similarly, according to Holland's (1997) theory, people select themselves into work environments that match their vocational interests, and this congruence leads to greater satisfaction and better performance. Person-environment fit is thus the degree to which individual and environmental attributes are compatible (Kristof-Brown et al., 2005).

There is some evidence linking the fit between the person and the occupation to job satisfaction, although the findings are mixed. Early meta-analytic work showed that fit matters for some vocational types but not for all (Tranberg, Slane, & Ekeberg, 1993). A recent study showed that congruence of RIASEC interest types with occupation was not associated with job satisfaction (Wille, Tracey, Feys, & De Fruyt, 2014). However, to the best of our knowledge, previous studies have not examined whether the congruence of personality

traits and mean personality of occupations is associated with job satisfaction. This is quite surprising, given the importance of person-environment fit for career counselling (Hartung, 2010) – by showing individuals the occupation where they might be most satisfied, they can pursue a career in that occupation but not bound by a certain job. Managers should also benefit from knowing which occupation is congruent with certain personality traits, as they can use this information to match the individual to the right job inside the organization in order to increase satisfaction at work.

1.3. Present study

The present study has two aims: (1) to examine the average levels of personality by occupational group, and (2) to examine the association of the cross-level interaction between the occupational mean personality and the individual's personality, with job satisfaction.

Regarding the first aim, we expect differences in the mean levels of the personality traits across occupations. Based on evidence from previous studies on the association between the RIASEC types and FFM personality traits (King et al., 2016; Larson et al., 2002; McKay & Tokar, 2012; Wille & De Fruyt, 2014), we expect the mean level of neuroticism to be lower in Realistic and Enterprising occupations, such as science and technology, skilled occupations, and managerial occupations. For extraversion, the mean level will be higher in occupations characterized by Enterprising and Social interests, such as managerial, personal services, and sales. The mean level of conscientiousness will be higher in Conventional and Enterprising occupations, such as administrative and managerial. Agreeableness will be highest in Social occupations, such as education and personal services. Finally, the highest mean level for openness will be found in occupations characterized by Investigative and Artistic interests, such as culture, health, and research occupations.

With regard to our second aim, we examine whether the match or mismatch between an individual's personality trait and the occupational mean of that personality trait differentially relates to job satisfaction. Thus, we examine whether also occupation could be important for person-environment fit, as occupational categories are important in guiding people's career prospects. We base our aim on person-environment fit theory, which states that it is the congruence between the individual and the environment that defines fit, and the better the fit the higher the satisfaction (Kristof-Brown et al., 2005). Thus, we expect an environment with a corresponding level regarding a personality trait should increase person-environment fit, and consequently job satisfaction. For example, individuals with low levels of neuroticism will be more satisfied in Realistic occupations, where the mean level of neuroticism is lower (fit between the individual's personality and the mean personality of the occupation).

2. METHOD

2.1. Participants and Procedure

The data for this study were drawn from the British Household Panel Survey (Taylor, Brice, Buck, & Prentice-Lane, 2010) and the Understanding Society – UK Household Longitudinal Study (University of Essex, 2014). We used data extracted from two waves (collected in 2005 and 2012) for our analyses.

Inclusion criteria were: (a) employed by someone other than yourself (self-employed participants were not included), (b) data from either BHPS or UKHLS (participants who had continued from BHPS to UKHLS contributed data only to BHPS), (c) employable age range (16-65 years; 614 participants were over 65), and (d) complete data on job satisfaction, personality, demographics (sex and age), and occupational group. We combined the BHPS and UKHLS datasets to form one pooled dataset. Based on the criteria outlined above, 22,787

participants were included in our analyses – 7,372 from BHPS and 15,415 from UKHLS. Of the participants, 12,307 (54%) were female and the mean age was 41 (range 16-65).

2.2. Measures

2.2.1. Job satisfaction

Job satisfaction was measured by a question on overall satisfaction with the current job (*“All things considered, how satisfied or dissatisfied are you with your present job overall?”*) on a 7-point scale from 1 (*not satisfied*) to 7 (*completely satisfied*).

2.2.2. Personality

Personality was measured using a 15-item questionnaire on the Five-Factor Model traits (Gerlitz & Schupp, 2005). Each personality dimension was assessed with three questions coded on a 7-point scale, where 0 indicated *“does not apply to me at all”*, and 6 indicated *“applies to me perfectly”*. The value range for each trait’s total score was 0–18. The internal consistencies (Cronbach α) across our sample (for BHPS wave 15 and UKHLS wave 3) were: neuroticism = .69, extraversion = .63, conscientiousness = .54, agreeableness = .58, openness = .65. Although the internal consistency estimates were modest, the short BFI measure has been shown to have good reliability in terms of test-retest correlations, and convergent and discriminant validity against longer personality inventories (Hahn, Gottschling, & Spinath, 2012; Lang, John, Lüdtke, Schupp, & Wagner, 2011; Soto & John, 2017)

2.2.3. Occupation

Occupation was coded according to SOC2000 (Office of National Statistics, 2000) with 25 sub-major occupational groups. SOC2000-coding is a universal occupational classification system, developed to allow government agencies and private industry to produce comparable data. More information on SOC2000 can be found at <https://www.bls.gov/soc/2000/socguide.htm>. The sub-major groups of the occupational

coding provide information on the kind of work performed and the skill level needed for the job. The 25 sub-major groups are listed in the Appendix (Table A.1).

2.2.4. Control variables

3. Previous research shows that both age and sex⁶ are associated with job satisfaction (Dobrow Riza, Ganzach, & Liu, 2018; Zou, 2015). Thus, we included them as control variables. Due to differences in data collection, we additionally controlled for the data source.

3.1. Analyses

In our data, individuals were nested within occupational groups. The control variables for all analyses were: grand-mean centred age, sex, and study (0=BHPS, 1=UKHLS). The FFM personality traits and job satisfaction were standardized.

Thus, the model for one personality trait, including a random intercept for job satisfaction, a random slope for personality trait, and a cross-level interaction between an individual's personality trait and the average personality trait of the individual's occupational group, took the form: $y_{ij} = \gamma_{00} + u_{0j} + \beta_1 P_{ij} + u_{1j} P_{ij} + \beta_2 P_{ij} \bar{P}_j + \varepsilon_{ij}$, where γ_{00} is the overall mean job satisfaction, y_{ij} is job satisfaction of individual i of occupational group j , P_{ij} is the personality score of person i of occupational group j , \bar{P}_j is the average personality score of occupational group j , u_{0j} is the random intercept of job satisfaction across occupational groups, u_{1j} is the random slope of personality trait across occupational groups, β_1 and β_2 are fixed regression coefficients, and ε_{ij} is the error term. In addition, sex, age, and study were included as individual-level fixed-effect covariates. We first modelled all the fixed effects of the personality traits together (model 1), then added random slopes for personality traits for which the random slopes improved model fit (model 2), and finally added interaction effects between the individual's and occupation's personality traits for the personality traits for

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which random slopes had been included (model 3).

We calculated R^2 at each of the two levels using the formula recommended by Snijders and Bosker (Snijders & Bosker, 1994), which indicates the explained variance at each level as a proportion of the total variance. All statistical analyses were conducted using Stata version 13 statistical software.

4. RESULTS

Descriptive statistics and correlations of the study variables are presented in Table 1.

Table 1. Descriptive statistics for the study variables

Variable (range)	Mean	SD	1.	2.	3.	4.	5.	6.	7.
1. Sex (0=male; 1=female)	0.54	0.50	1						
2. Age (16-65)	41.46	12.11	-0.01	1					
3. Neuroticism (0-18)	7.58	3.85	0.22***	-0.09***	1				
4. Extraversion (0-18)	10.71	3.59	0.12***	-0.09***	-0.18***	1			
5. Conscientiousness (0-18)	13.43	3.03	0.13***	0.17***	-0.15***	0.19***	1		
6. Agreeableness (0-18)	13.59	3.01	0.18***	0.08***	-0.07***	0.16***	0.37***	1	
7. Openness (0-18)	10.84	3.51	-0.06***	-0.06***	-0.10***	0.26***	0.18***	0.19***	1
8. Job satisfaction (1-7)	5.30	1.38	0.06***	0.03***	-0.13***	0.07***	0.12***	0.12***	0.02***

*** Significant at the .001 level (two-tailed)

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The frequencies of occupational groups are shown in the Appendix (Table A.1). The largest group was corporate managers (2,520 individuals; 11.06% of the sample) and the smallest was skilled agricultural trades (156; 0.68%).

We calculated the intraclass correlations (ICC1) and the group mean reliability estimates (ICC2) of our study variables. The ICC1 is an estimate of the extent to which individual ratings are attributable to occupation, whereas the ICC2 is an estimate of the reliability of the group means (Bliese, 2000). In our study, ICC2 value was .90 for job satisfaction (ICC1 = .010), indicating a highly reliable group mean, even though only 1% of the variance in job satisfaction was explained by occupational grouping. ICC2 estimates of the personality traits were .97 for neuroticism (ICC1=.031), .91 for extraversion (ICC1 = .011), .90 for conscientiousness (ICC1 = .010), .95 for agreeableness (ICC1 = .022), and .98 for openness to experience (ICC1 = .043). The ICC2 estimates thus indicated that the occupation means of the study variables could be reliably estimated with the large sample, despite the ICC1 estimates being modest (Bliese, 2000).

4.1. Occupational Differences in Personality Traits

There was significant random variance in the intercept of all five personality traits between occupations (neuroticism: $\sigma^2 = 0.09$, standard error [*s.e.*]= 0.03; extraversion: $\sigma^2 = 0.10$, *s.e.* = 0.03, conscientiousness: $\sigma^2 = 0.06$, *s.e.* = 0.02; agreeableness: $\sigma^2 = 0.04$, *s.e.* = 0.01; openness: $\sigma^2 = 0.59$, *s.e.* = 0.17), suggesting that the mean level of the FFM personality traits varies across occupations. The estimated means and standard errors for the five personality traits are shown in the Appendix (Table A.2). The standard deviation (*SD*) for the random intercept of job satisfaction was 0.12 (square root of 0.0135), which represented around one-tenth of the overall standard deviation in job satisfaction across individuals (*SD* = 1.4).

4.2. Interaction between personality and mean occupational personality explaining job satisfaction

Results for the association between the FFM personality traits and job satisfaction across occupations are shown in Table 2. The results of Model 1 showed significant ($p < .05$) fixed effects for all personality traits; lower neuroticism and higher extraversion, conscientiousness, agreeableness, and openness were all associated with higher job satisfaction. To test if random slopes were needed, we individually added the slope variance of each personality trait (random-coefficients model; Model 2), and performed a likelihood ratio test to examine which slopes improved the model. The likelihood ratio tests showed that the slopes of neuroticism ($p < .001$) and openness ($p < .001$) improved the model. Model 2 results showed there is variance in the slopes of neuroticism and openness, suggesting that for these traits some occupations are a better fit than others.

Model 3 in Table 2 included the interaction term between the personality traits with significant slope variance and the corresponding occupation mean personality. Adding the interaction term increased explained variance in level 2, indicating that occupational mean personality and the cross-level interaction explained 4.5% of the variance of job satisfaction at the occupational level. Occupational mean neuroticism and openness moderated the association between job satisfaction and individual-level neuroticism, and openness, respectively. Examination of the simple slopes revealed there was a negative association between neuroticism and job satisfaction when occupational mean neuroticism was high (i.e. +1 SD; $\gamma = -0.11, p < .001$), and when occupational mean neuroticism was low (i.e. -1 SD; $\gamma = -0.16, p < .001$). There was also a negative association between openness and job satisfaction when occupational mean openness was low (i.e. -1 SD; $\gamma = -0.05, p < .001$). The association between openness and job satisfaction was non-significant when occupational mean openness was high (i.e. +1 SD; $\gamma = 0.01, p = .291$). These simple slopes are plotted in Figure 1. The

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interaction terms explained 62.5% and 72.7% of the variance in the individual-level neuroticism and openness slope, respectively (calculated as the proportion of change between the slope variance in Model 2 and Model 3; neuroticism = $[0.0008-0.0003]/0.0008$, openness = $[0.0011-0.0003]/0.0011$).

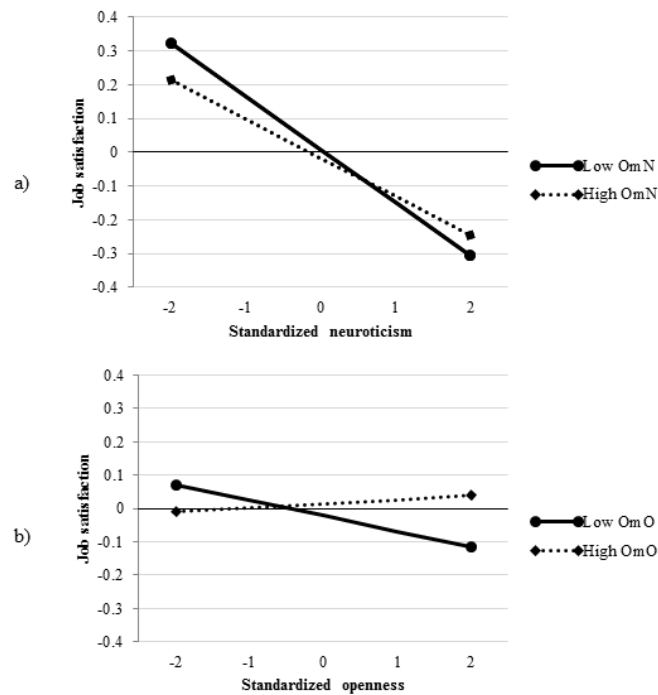


Figure 1. Interaction effects of neuroticism (Figure 3a) and openness (Figure 3b) with the mean occupation counterpart on job satisfaction (OmN = Occupational mean neuroticism, OmO = Occupational mean openness).

Table 2. Estimates and standard errors in the multilevel analyses on the associations between personality traits and job satisfaction

	Job satisfaction							
	Null model		Random-intercept (Model 1)		Random-coefficient (Model 2)		Cross-level interaction (Model 3)	
	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.
Level 1 fixed effects								
Intercept	0.00	0.02	0.01	0.02	0.01	0.02	-0.00	0.02
<i>Covariates</i>								
Sex (0=male, 1=female)			0.12***	0.02	0.13***	0.02	0.13***	0.02
Age			0.00	0.00	0.00	0.00	0.00	0.00
Data id (0=BHPS, 1=UKHLS)			-0.16***	0.01	-0.16***	0.01	-0.16***	0.01
<i>Independent variables</i>								
Neuroticism (N)			-0.13***	0.01	-0.14***	0.01	-0.14***	0.01
Extraversion (E)			0.02**	0.01	0.02**	0.01	0.02**	0.01
Conscientiousness (C)			0.06***	0.01	0.06***	0.01	0.06***	0.01
Agreeableness (A)			0.07***	0.01	0.07***	0.01	0.07***	0.01
Openness (O)			-0.02**	0.01	-0.02	0.01	-0.02*	0.01
Level 2 fixed effects								
Occupational mean N (OmN)							-0.07	0.13
Occupational mean O (OmO)							0.09	0.10
Cross-level interactions								
N x OmN							0.12**	0.05
O x OmO							0.15***	0.04
Random effects								
σ^2	0.0135	0.0045	0.0112	0.0038	0.0112	0.0038	0.0105	0.0036
$\sigma^2(N)$					0.0008	0.0005	0.0003	0.0004
$\sigma^2(O)$					0.0011	0.0006	0.0003	0.0003
$R^2_{level 1}$			0.043		0.043		0.046	
$R^2_{level 2}$			0.157		0.157		0.202	
Akaike's information criterion	64513.62		63557.82		63541.25		63531.11	
Bayesian information criterion	64537.72		63646.19		63645.69		63667.69	

Notes.

 σ^2 = intercept variance; $\sigma^2(N)$ = slope variance of neuroticism; s.e. = standard error

* p < 0.05; ** p < 0.01; *** p < 0.001

To illustrate how the associations of neuroticism and openness with job satisfaction differed across occupations depending on the corresponding mean personality of the occupation, we calculated the best linear unbiased predictions (BLUPs), using empirical Bayes predictions for each occupation, producing 25 regression slopes for each personality trait. Figure 2 shows the predicted estimate of each occupation's regression slope.

The steepest slopes (indicating the strongest effect of the trait) for neuroticism were found in occupations with the lowest average levels of neuroticism, and the flattest slopes (indicating the weakest effect of the trait) in occupations with the highest average levels of neuroticism. A similar trend was visible also for openness, where occupations with low average levels of openness had a steeper negative slope, and those with high average levels of openness had a flatter slope.

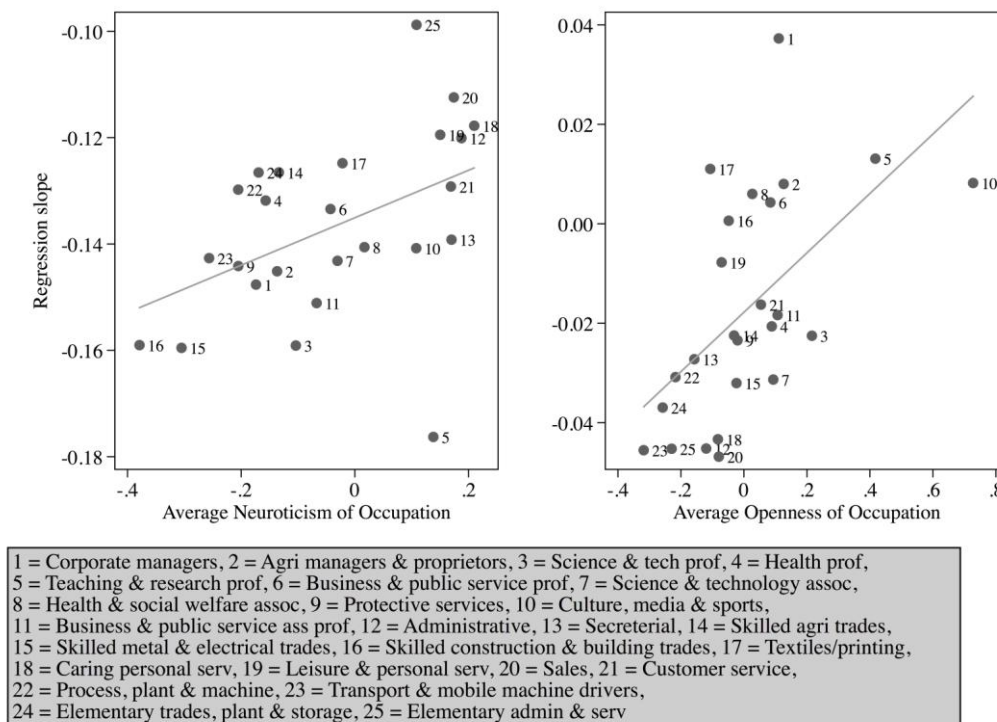


Figure 2. Estimated regression slopes for neuroticism (left) and openness (right) for the 25 occupational groups

5. DISCUSSION

In order to extend person–environment fit theory and offer a better understanding of person-occupation fit, the aim of this study was to examine personality-based fit in occupations. The ASA-model (Schneider, 1987) and Holland’s (Holland, 1997) model, on vocational interests, suggest that individuals choose their environment based on their personality, and that some environments then become homogenous and provide a better fit than others. Drawing on these theories, we proposed that (1) personality steers people into certain occupations, so that different occupations have different mean levels of personality traits, and (2) the variability in how personality is associated with satisfaction in different occupations is partly related to the average level of the personality trait in that occupation. A large sample of almost 23,000 participants from 25 different occupational groups enabled us to model variation in the intercept and slopes of personality traits and job satisfaction across the occupational groups.

Regarding our first aim, all FFM traits showed occupational variation, with the greatest found in openness to experience. These findings are in line with the previous studies, where people in the same occupation exhibit personality traits more similar to each other than to people in other occupations (King et al., 2016; Woods & Hampson, 2010). Our specific findings were in line with our expectations. The lowest average levels of neuroticism were found in skilled construction and building, and in managerial and health occupations. For extraversion, the highest mean levels were in managerial occupations and in business and public service associate professionals. Conscientiousness clustered around skilled trades and managerial occupations, and agreeableness around personal care, leisure, and teaching occupations. The highest mean levels of openness were found in culture, media and sports, and teaching and research professionals.

With regard to our second aim, we found that for neuroticism and openness, the fit between an individual’s own personality trait and the mean level in the occupation of the corresponding trait, matters for job satisfaction. When occupational mean neuroticism was

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low, individuals displaying high neuroticism had lower job satisfaction than when they were in an occupation with correspondingly high average levels of neuroticism. Conversely, individuals low in neuroticism had greater job satisfaction in occupations where the average level of neuroticism is low, than in occupations where the average level of neuroticism is high. This finding is in line with research and theories on person-environment fit and personality congruence (Kristof-Brown et al., 2005), and shows that neuroticism appears to be important for person-occupation fit. Furthermore, we found that when occupational mean openness was low, individuals displaying high openness to experience had lower job satisfaction than individuals low on openness. Perhaps those individuals are not happy with the occupation's relatively low level of novelty, cognitive challenge, and opportunities for personal innovation. This may be analogous to a mismatch between a person's and occupation's educational or skill requirements; comparatively over-educated and over-skilled individuals are less likely to be happy with their job (Flisi, Goglio, Meroni, Rodrigues, & Vera-Toscano, 2016).

The current study has some practical implications. First, our results suggest some personality dimensions may be more important than others when assessing person-occupation fit in career choice counselling. Second, a person-centred approach to improving wellbeing at work would give employees an opportunity to voice their concerns, and craft their job to create a better fit. Third, our results can be helpful for individuals searching for the right occupation or in the process of changing occupations. For example, the highest average level of neuroticism was in culture, media and sports occupations. A person with high neuroticism could consider a career in that occupation, since others there will be more similar, which might be beneficial to the person's wellbeing. However, future studies should explore these associations further to make more precise suggestions for self-selection.

When evaluating the findings presented in this article, some limitations of the current study should be taken into account. First, personality traits were measured using a relatively short 15-item scale. The short BFI measure has been shown to have good psychometric properties (Hahn et al., 2012; Lang et al., 2011; Soto & John, 2017) and it has been shown that even shorter questionnaires work reasonably well in personality research (Gosling, Rentfrow, & Swann, 2003). However, we suggest that researchers also use longer scales, as they might allow for more specific analyses on the facets of personality traits and their contribution to person-occupation fit. Second, while the sample in our study was large, some of the occupational groups were quite small. Thus, we were not able to examine more specific occupational subgroups. Our results therefore reflect quite broad groups containing several occupations. Third, the ICC1 estimates for personality were modest, between 1% and 3%, indicating that personality does not cluster strongly according to occupation. While the large sample size allowed us to derive sufficiently accurate estimates for average personality scores of occupations, it must be emphasized that, based on our data, individuals within the same occupation vary considerably in their personality traits.

To conclude, the current study showed that the fit between a person's personality and the modal personality of the occupation is relevant to job satisfaction. Specifically, we showed that the more alike your personality (neuroticism and openness) is to others in your occupation, the more satisfied you are. Our study provides a stepping-stone for future studies on person-occupation fit. These should concentrate on examining smaller occupations, longitudinal associations and changes in fit, and occupation fit with dispositional factors other than personality traits.

6. REFERENCES

- Avery, R. E., Smillie, L. D., & Fife-Schaw, C. R. (2015). Employee achievement orientations and personality as predictors of job satisfaction facets. *Personality and Individual Differences, 76*, 56–61.
- Barrick, M. R., Mount, M. K., & Gupta, R. (2003). Meta-Analysis of the Relationship Between The Five-Factor Model of Personality and Holland's Occupational Types. *Personnel Psychology, 56*(1), 45–74.
- Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Koslowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 349–381). San Francisco: Jossey-Bass Publishers.
- Bradley-Geist, J. C., & Landis, R. S. (2011). Homogeneity of Personality in Occupations and Organizations: A Comparison of Alternative Statistical Tests. *Journal of Business and Psychology, 27*(2), 149–159.
- Cohrs, J. C., Abele, A. E., & Dette, D. E. (2006). Integrating situational and dispositional determinants of job satisfaction: Findings from three samples of professionals. *Journal of Psychology, 140*(4), 363–395.
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.
- Digman, J. M. (1990). Personality Structure: Emergence of the Five-Factor Model. *Annual Review of Psychology, 41*(1), 417–440.
- Dobrow Riza, S., Ganzach, Y., & Liu, Y. (2018). Time and Job Satisfaction: A Longitudinal Study of the Differential Roles of Age and Tenure. *Journal of Management, 44*(7),

2558–2579.

University of Essex (2014). *Understanding Society: Waves 1-4, 2009-2013*.

Flisi, S., Goglio, V., Meroni, E. C., Rodrigues, M., & Vera-Toscano, E. (2016). Measuring Occupational Mismatch: Overeducation and Overskill in Europe-Evidence from PIAAC. *Social Indicators Research*, 131(3), 1–39.

Gerlitz, J.-Y., & Schupp, J. (2005). Zur Erhebung der Big-Five-basierten Persönlichkeitsmerkmale im SOEP. *Research Notes* 4, 1–44.

Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37(6), 504–528.

Hahn, E., Gottschling, J., & Spinath, F. M. (2012). Short measurements of personality - Validity and reliability of the GSOEP Big Five Inventory (BFI-S). *Journal of Research in Personality*, 46(3), 355–359.

Hakulinen, C., Elovainio, M., Pulkki-Råback, L., Virtanen, M., Kivimäki, M., & Jokela, M. (2015). Personality and Depressive Symptoms: Individual-Participant Meta-Analysis of 10 Cohort Studies. *Depression and Anxiety*, 32(7), 461–470.

Hartung, P. J. (2010). Practice and Research in Career Counseling and Development — 2009. *Career Development Quarterly*, 59(4), 98–143.

Holland, J. (1997). *Making vocational choices: A theory of vocational personalities and work environments*. Odessa, FL: Psychological Assessment Resources.

Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: a meta-analysis. *Journal of Applied Psychology*, 87(3), 530–541.

King, D. D., Ott-Holland, C. J., Ryan, A. M., Huang, J. L., Wadlington, P. L., & Elizondo, F. (2016). Personality Homogeneity in Organizations and Occupations: Considering Similarity Sources. *Journal of Business and Psychology*.

Kristof-Brown, A., & Guay, R. P. (2011). Person–environment fit. In *APA handbook of*

- industrial and organizational psychology, Vol 3: Maintaining, expanding, and contracting the organization.* (pp. 3–50). Washington: American Psychological Association.
- Kristof-Brown, A., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of Individuals' Fit At Work: a Meta-Analysis of Person–Job, Person–Organization, Person–Group, and Person–Supervisor Fit. *Personnel Psychology*, 58(2), 281–342.
- Lang, F. R., John, D., Lüdtke, O., Schupp, J., & Wagner, G. G. (2011). Short assessment of the Big Five: Robust across survey methods except telephone interviewing. *Behavior Research Methods*, 43(2).
- Larson, L. M., Rottinghaus, P. J., & Borgen, F. H. (2002). Meta-analyses of Big Six interests and Big Five personality factors. *Journal of Vocational Behavior*, 61(2), 217–239.
- McKay, D. A., & Tokar, D. M. (2012). The HEXACO and five-factor models of personality in relation to RIASEC vocational interests. *Journal of Vocational Behavior*, 81(2), 138–149.
- Ostroff, C., & Zhan, Y. (2012). Person-environment fit in the selection process. In N. Schmitt (Ed.), *The Oxford Handbook of Personnel Assessment and Selection* (pp. 252–273). Oxford: Oxford University Press.
- Rounds, J., Smith, T., Hubert, L., Lewis, P., Rivkin, D., Box, P. O., & Carolina, N. (1999). *Development of occupational interest profiles for O*NET*. *Www.Onetcenter.Org*. Retrieved from /www.onetcenter.org/1999/Development of occupational interest profiles for ONET.pdf
- Schneider, B. (1987). The people make the place. *Personnel Psychology*, 40(3), 437–453.
- Snijders, T. A., & Bosker, R. J. (1994). Modeled Variance in Two-Level Models. *Sociological Methods & Research*, 22(3), 342–363.
- Soto, C. J., & John, O. P. (2017). Short and extra-short forms of the Big Five Inventory–2:

- The BFI-2-S and BFI-2-XS. *Journal of Research in Personality*, 68, 69–81.
- Office of National Statistics (2000). *Standard Occupational Classification 2000 (SOC2000)* (Vol. 1). London: The Stationery Office.
- Strickhouser, J. E., Zell, E., & Krizan, Z. (2017). Does personality predict health and well-being? A metasynthesis. *Health Psychology*, 36(8), 797–810.
- Taylor, M., Brice, J., Buck, N., & Prentice-Lane, E. (2010). *British Household Panel Survey User Manual Volume A: Introduction, Technical Report and Appendices*. Colchester: University of Essex.
- Tranberg, M., Slane, S., & Ekeberg, S. E. (1993). The relation between interest congruence and satisfaction: A metaanalysis. *Journal of Vocational Behavior*.
- Verquer, M. L., Beehr, T. A., & Wagner, S. H. (2003). A meta-analysis of relations between person-organization fit and work attitudes. *Journal of Vocational Behavior*, 63(3), 473–489.
- Wille, B., & De Fruyt, F. (2014). Vocations as a source of identity: Reciprocal relations between Big Five personality traits and RIASEC characteristics over 15 years. *Journal of Applied Psychology*, 99(2), 262–281.
- Wille, B., Tracey, T. J. G., Feys, M., & De Fruyt, F. (2014). A longitudinal and multi-method examination of interest-occupation congruence within and across time. *Journal of Vocational Behavior*, 84(1), 59–73.
- Woods, S. A., & Hampson, S. E. (2010). Predicting adult occupational environments from gender and childhood personality traits. *The Journal of Applied Psychology*, 95(6), 1045–1057.
- Zou, M. (2015). Gender, work orientations and job satisfaction. *Work, Employment and Society*, 29(1), 3–22.

Table A.1. Frequencies of occupational groups

Occupational group	Freq.	%
Corporate managers	2520	11.06
Managers and proprietors in agriculture and services	636	2.79
Science and technology professionals	704	3.10
Health professionals	236	1.04
Teaching and research professionals	1404	6.16
Business and public service professionals	738	3.24
Science and technology associate professionals	369	1.62
Health and social welfare associate professionals	1230	5.4
Protective service occupations	294	1.29
Culture, media and sports occupations	490	2.15
Business and public service associate professionals	1215	5.33
Administrative occupations	2256	9.90
Secretarial and related occupations	615	2.70
Skilled agricultural trades	156	0.68
Skilled metal and electrical trades	822	3.61
Skilled construction and building trades	555	2.44
Textiles, printing and other skilled trades	445	1.95
Personal care and service occupations	1862	8.17
Leisure and other personal service occupations	468	2.05
Sales occupations	1479	6.49
Customer service occupations	359	1.58
Process, plant and machine operatives	767	3.37
Transport and mobile machine drivers and operatives	762	3.34
Elementary trades, plant and storage related occupations	627	2.75
Elementary administration and service occupations	1778	7.8

Table A.2. Estimated means and standard errors for FFM personality traits

Occupation	Neuroticism		Extraversion		Conscientiousness		Agreeableness		Openness	
	M	s.e.	M	s.e.	M	s.e.	M	s.e.	M	s.e.
Corporate managers	7.19	0.07	11.04	0.07	13.67	0.06	13.35	0.06	11.19	0.07
Managers and proprietors in agriculture and services	7.28	0.13	11.24	0.13	13.55	0.10	13.41	0.10	11.27	0.13
Science and technology professionals	7.69	0.13	10.09	0.12	13.26	0.10	13.42	0.10	11.35	0.13
Health professionals	7.15	0.19	10.36	0.19	13.62	0.15	13.61	0.14	11.16	0.21
Teaching and research professionals	7.90	0.09	10.74	0.09	13.34	0.07	13.72	0.07	12.42	0.09
Business and public service professionals	7.54	0.12	10.51	0.12	13.24	0.10	13.44	0.09	11.14	0.12
Science and technology associate professionals	7.78	0.16	10.14	0.16	13.34	0.13	13.45	0.12	10.97	0.17
Health and social welfare associate professionals	7.24	0.10	10.66	0.10	13.36	0.08	13.69	0.08	11.17	0.10
Protective service occupations	7.30	0.17	11.08	0.17	13.62	0.14	13.42	0.13	10.59	0.19
Culture, media and sports occupations	7.96	0.15	10.99	0.14	13.27	0.12	13.61	0.11	13.18	0.15
Business and public service associate professionals	7.38	0.10	11.05	0.10	13.54	0.08	13.44	0.08	11.18	0.10
Administrative occupations	7.95	0.08	10.51	0.07	13.34	0.06	13.67	0.06	10.56	0.07
Secretarial and related occupations	7.62	0.13	10.59	0.13	13.52	0.11	13.65	0.10	10.65	0.14
Skilled agricultural trades	7.67	0.21	10.40	0.21	13.58	0.17	13.67	0.15	10.58	0.26
Skilled metal and electrical trades	7.24	0.12	10.65	0.11	13.82	0.09	13.53	0.09	10.44	0.12
Skilled construction and building trades	7.08	0.14	11.02	0.14	14.07	0.11	13.60	0.10	10.35	0.14
Textiles, printing and other skilled trades	7.59	0.15	10.61	0.15	13.40	0.12	13.45	0.11	10.44	0.16
Personal care and service occupations	7.82	0.08	10.55	0.08	13.52	0.07	14.12	0.06	10.78	0.08
Leisure and other personal service occupations	7.74	0.15	10.92	0.14	13.47	0.12	13.75	0.11	10.69	0.15
Sales occupations	7.78	0.09	10.76	0.09	13.06	0.07	13.60	0.07	10.59	0.09
Customer service occupations	7.74	0.16	10.81	0.16	13.16	0.13	13.69	0.12	10.99	0.18
Process, plant and machine operatives	7.33	0.12	10.52	0.12	13.33	0.10	13.33	0.09	9.93	0.12
Transport and mobile machine drivers and operatives	7.45	0.12	10.83	0.12	13.49	0.10	13.45	0.09	9.55	0.12
Elementary trades, plant and storage related occupations	7.46	0.13	10.57	0.13	13.47	0.11	13.46	0.10	9.73	0.13
Elementary administration and service occupations	7.80	0.08	10.57	0.08	13.19	0.07	13.60	0.07	10.06	0.08

M = Estimated mean

s.e. = Estimated standard error